

**BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA**

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APPLICATION TO CHANGE WATER RIGHT) NO. 42B 30107350 BY DIAMOND CROSS) PROPERTIES LLC)	PRELIMINARY DETERMINATION TO GRANT CHANGE
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On July 5, 2016, Diamond Cross Properties, LLC (Applicant) submitted Application to Change Water Right No. 42B 30107350 to change Statement of Claim No. 42B 183628-00 to the Billings Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of December 21, 2016.

The Department met with the Applicant for a pre-Application meeting on June 29, 2016. An Environmental Assessment for this Application was completed on December 21, 2016.

INFORMATION

The Department considered the following information submitted by the Applicant.

Application as filed:

- Form 606

Information Received after Application Filed:

- E-mail from Robert Berger, Applicant's attorney, to Mark Elison, Department hydrologist, dated October 24, 2016, clarifying acres to be retired if necessary.

Information within the Department's Possession/Knowledge

- Water Resources Survey, Rosebud County, July 1948.
- Aerial photograph WY 7A-90, dated 1944.
- USDA aerial photograph DIW-3T-79, dated August 23, 1957.
- USDA aerial photograph 578-151, dated June 29, 1980.
- Master's Report, Montana Water Court Case 42B-14, dated April 6, 2011, and adopted May 9, 2011.
- 1914 decree in the Seventh Judicial District in and for Custer County (Miles City Decree).
- Environmental Assessment dated December 21, 2016.

The Department has fully reviewed and considered the Environmental Assessment and evidence and argument submitted with this Application and **preliminarily determines** pursuant

to the Montana Water Use Act (Title 85, chapter 2, parts 3 and 4, MCA) as follows. **NOTE:** Department or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AC means acres; AF/YR means acre-feet per year; and POD means point of diversion.

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

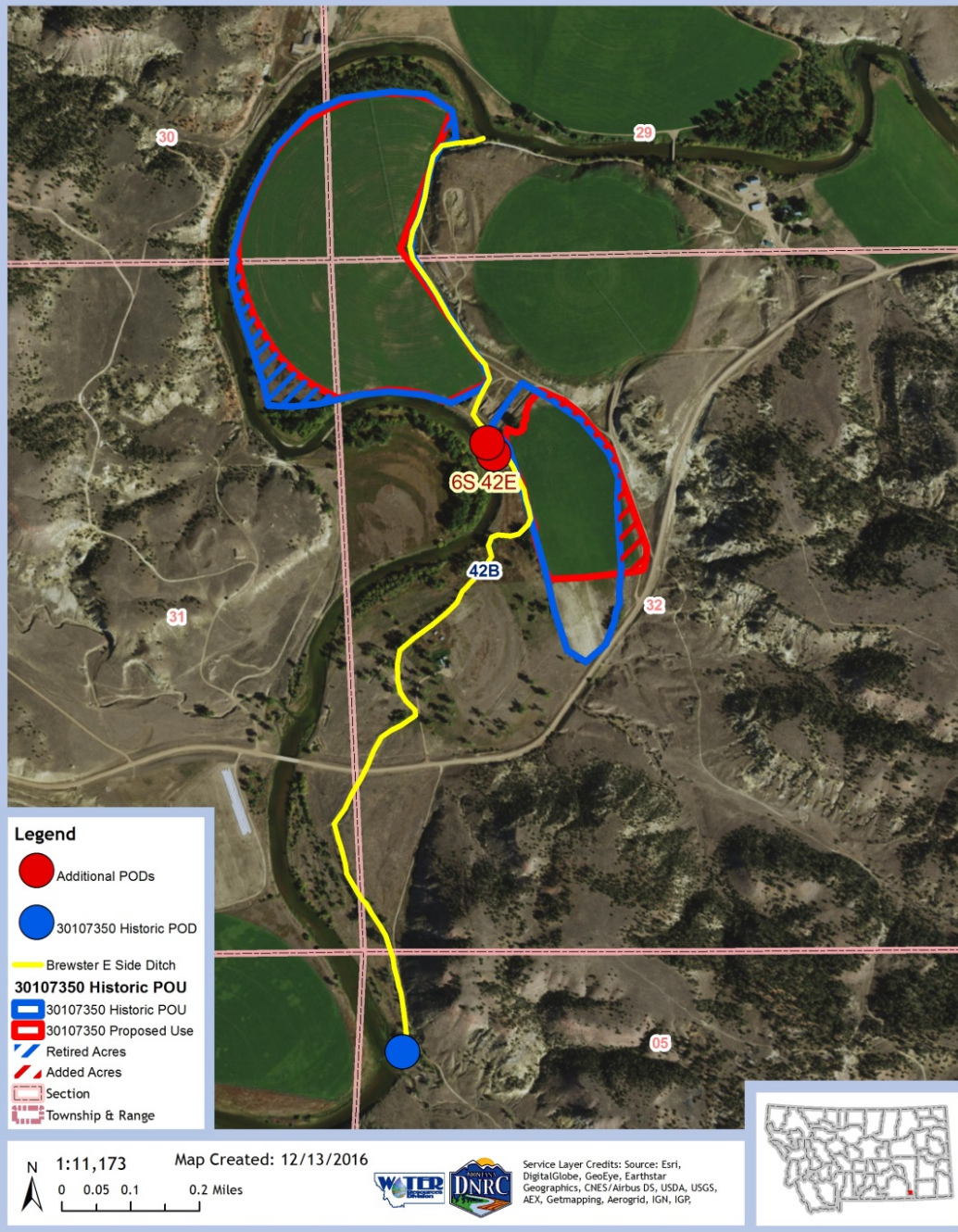
1. Applicant seeks to change Statement of Claim No. 42B 183628-00 for 2.58 CFS up to 460.4 AF claimed volume from the Tongue River for the purpose of flood irrigation on 103.36 AC with a priority date of May 1, 1899. The period of use and the period of diversion are 4/15 to 10/15. The place of use is 103.36 AC in the SW of Section 29, SE of Section 30, NE of Section 31, and the W2 Section 32, T6S, R42E, Rosebud County. The point of diversion is a headgate in SWNWNW Section 5, T7S, R42E, Rosebud County. Water was conveyed to the place of use by the Brewster East Side Ditch. The place of use is located on the east side of the Tongue River approximately 6.5 miles southwest of Birney.

Table 1: WATER RIGHT PROPOSED FOR CHANGE

WR Number No. & Type	42B 183628-00	Statement of Claim
Priority date	5/01/1899	
Source	Tongue River	
Purpose & Acres	Sprinkler and Flood	103.36
Maximum Flow Rate	2.58 CFS	
Volume (Acre-Feet) - Claimed	460.4	
Point of Diversion	SWNWNW Section 5 T7S R42E	
Period of Diversion & Diversion Means	4/15 – 10/15	Pump
Place of Use & County	S2S2NWSW, SWSW Section 29 E2SESE Section 30 E2NENE Section 31 SEENW, NWNW, SENW, N2NESW Section 32 All in T6S R42E	Rosebud
Period of Use	4/15 – 10/15	

2. The Applicant has a contract for 2,200 AF with the Tongue River Water Users Association (TRWUA) for water stored in the Tongue River Reservoir. The contract water, which has a priority date of April 21, 1937, is used by the Applicant in amounts that vary from year to year dependent on flow in the Tongue River and irrigation needs. The Applicant only uses contract water from TRWUA when their direct flow right cannot be met. Contract water is stored in the Tongue River Dam and owned by the State of Montana, Department of Natural Resources and therefore is not considered supplemental in this change application.

Location Map - Diamond Cross Properties LLC - 30107350



CHANGE PROPOSAL

FINDINGS OF FACT

3. The Applicant proposes to add two points of diversion in NESWNW Section 32, T6S, R42E, Rosebud County. The new points of diversion will be pumps in the Tongue River serving one center pivot sprinkler and one side-roll sprinkler. The original point of diversion and ditch

would be used to flood irrigate acres not covered by the sprinkler systems. The sprinkler systems are centered on the historic place of use. Due to the geometry of the sprinkler systems relative to the historically flood irrigated land, the Applicant is also changing the place of use. They will retire 4.73 AC; 4.3 AC in NENE Section 31 and 0.43 AC in SWSW Section 29, T6S, R42E to account for an addition of 3.06 AC under the side-roll sprinkler system in SENW and NENW Section 32, T6S, R42E.

CHANGE CRITERIA

4. The Department is authorized to approve a change if the applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. Matter of Royston, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an applicant's burden to prove change criteria by a preponderance of evidence is "more probably than not."); Town of Manhattan v. DNRC, 2012 MT 81, ¶8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

(c) The proposed use of water is a beneficial use.

(d) The applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

5. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. *E.g., Hohenlohe*, at ¶¶ 29-31; *Town of Manhattan*, at ¶8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991).

HISTORIC USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historic Use

6. The Rosebud County Water Resources Survey, dated July, 1948, shows 106.49 AC irrigated on the basis of aerial photograph WY 7A-90, dated 1944. USDA aerial photograph DIW-3T-79, dated August 23, 1957, shows 103.36 AC irrigated. USDA aerial photograph 578-151, dated June 29, 1980, shows 108.14 AC irrigated. Based upon a map included in a stipulation by the Applicant in Montana Water Court Case # 42B-14, the Master's report, dated April 6, 2011, and adopted May 9, 2011, shows 103.36 AC irrigated. The maximum historic irrigated acres for this water right is 103.36 AC as shown on the post-decree abstract.

7. The maximum historic flow rate for this water right is 2.58 CFS. Two appropriations denominated 13-a for Thomas Salverson and 13-b for C. A. Randall were included in the 1914 decree in the Seventh Judicial District in and for Custer County (Miles City Decree). The two appropriations total 2.58 CFS and are now owned by the Applicant. The Masters Report in Montana Water Court Case # 42B -14 dated April 6, 2011, and approved on May 9, 2011, determined that this water right had a decreed flow rate of 2.58 CFS. Based upon ditch measurements provided by the Applicant, the Brewster East Side Ditch is capable of conveying at least 2.58 CFS. The decreed flow rate equates to 11.2 GPM/AC.

8. The Applicant did not file a Historic Use Addendum and has chosen to proceed under ARM 36.12.1902 (10 & 16). The historic consumptive use (volume) for this water right is 112.17 AF. Based on 103.36 AC with an Irrigation Water Requirement (IWR) for flood irrigation in Rosebud County at Birney of 24.57 inches and a county management factor of 47.7%, the historic consumptive use is 100.95 AF ($103.36 \times 24.57 / 12 \times 0.477$). The Department adds 5% of field applied volume to account for irrecoverable losses in flood irrigation. Using 45% efficiency, the field applied volume is 224.33 AF ($100.95 / 0.45$) and the irrecoverable losses are $224.33 \times 0.05 = 11.22$ AF. Total consumptive use including irrecoverable losses for this water right is 112.17 AF.

Rosebud County (Birney) Flood ET (Inches)	Rosebud County 1964-1973 Management Factor (Percent)	Historic Acres	Historic Consumed Volume (AF) (without IL)	On-farm Efficiency (Percent)	Field Application AF	Historic Irrecoverable Losses (IL) Flood 5%:	HCV AF (Including IL)
24.57	47.7%	103.36	100.9	45%	224.3	11.2	112.2

9. The Historic diverted volume for this water right is 323.86 AF. The historic diverted volume is the applied volume (consumptive use divided by on farm efficiency) + conveyance loss. Conveyance loss includes seepage, vegetative loss and evaporation from the ditch prior to reaching the fields. Parameters used in calculating conveyance loss are: ditch length = 4966 feet (0.94 miles), wetted perimeter = 15.66 feet, width = 10 feet, flow rate = 2.58 CFS, days irrigated = 54, ditch loss rate (loam, sandy loam) = 1.0, annual evaporation from Soil Conservation Service Technical Note: Environment No. 7 = 48 inches and period adjusted evaporation = 1.2 feet. The historic number of days the ditch was operational are unknown. In recent years, the Applicant has irrigated for approximately 54 days and this number was used in calculation of conveyance losses.

Seepage loss calculated as (wetted perimeter)(ditch length)(loss rate)(days)/43560 ft²/AC is 96.4 AF ((15.66 x 4966 x 1 x 54)/43560).

Vegetative loss calculated as (% loss per mile)(flow rate)(days)(ditch length)(unit conversion factor) is 1.96 AF (0.0075 x 2.58 x 54 x 0.94 x 2).

Evaporation calculated as (ditch width)(ditch length)(adjusted evaporation rate)/(square feet per acre) is 1.17 AF ((10 x 4966 x 1.03)/43560).

Total conveyance losses are 99.53 AF (96.4 + 1.96 + 1.17) and the historic diverted volume is 323.86 AF (224.33 + 99.53).

Historic Diverted Volume (HDV)	HCV AF (minus IL)	On-farm Efficiency	Seasonal Conveyance Loss Volume (seepage loss + vegetation loss + ditch evaporation)	Total HDV AF	
	100.9	45%	99.5	323.9	
Seepage Loss:	Ditch Wetted Perimeter (Feet)	Ditch Length (Feet)	Ditch Loss Rate (ft3/ft2/day)	Days Irrigated	Seepage Loss (/43560)

	15.66	4966	1	54	96.4
Vegetation Loss:	% loss/mile	Est. Flow Rate (CFS)=	Days Irrigated	ditch length (miles)	Vegetation Loss (*2)
	0.0075	2.58	54	0.9	2.0
Ditch Evaporation:	Ditch Width (Feet)	Ditch Length (Feet)	Annual Evaporation (SCS)	Period Adjusted Evaporation	Ditch Evaporation (/43560)
	10	4966	4	1.03	1.2

10. The Department finds the following historic use of Statement of Claim 42B 183628-00

WR Number No. & Type	42B 183628-00	Statement of Claim
Priority date	5/1/1899	
Diverted Volume	323.9 AF	
Flow Rate	2.58 CFS	
Purpose (Total Acres)	103.36	
Consumptive Use	112.2 AF	
Place of Use	S2S2NWSW, SWSW Section 29 E2SESE Section 30 E2NENE Section 31 SENENW, NWNW, SENW, N2NESW Section 32 All in T6S R42E	
Period of Use	4/15 – 10/15	
Point of Diversion	SWNWNW Section 5 T7S R42E	
Period of Diversion & Diversion Means	4/15 – 10/15	Headgate

FINDINGS OF FACT – Adverse Effect

11. The Applicant seeks to add two points of diversion. The new PODs are pumps in the Tongue River that supply individual center pivot or side roll sprinkler systems. The Brewster East Side Ditch headgate and ditch would be retained to provide flood irrigation on acres not covered by sprinkler systems.

12. The two pumps that represent the proposed points of diversion have capacity of 300 GPM (pump 19) and 500 GPM (pump 20). In combination the pumps have capacity of 800 GPM (1.78 CFS). The Applicant does not use the Brewster East Side Ditch headgate simultaneously with any of the pumps but would retain the headgate diversion because the Applicant intends to flood irrigate acres not covered by the sprinkler systems. The combined flow rate of the headgate and the pumps cannot exceed the historic flow rate of 2.58 CFS. The following remark will be added to the change authorization for clarification.

IMPORTANT INFORMATION

THE CUMULATIVE DIVERTED FLOW RATE FROM PUMPS 19, AND 20, AND THE BREWSTER EAST SIDE DITCH HEADGATE CANNOT AT ANY TIME EXCEED 2.58 CFS.

13. The Applicant proposes to irrigate approximately 69.15 AC with a partial circle center pivot sprinkler and approximately 22.82 AC with a side-roll sprinkler. The Applicant proposes to flood irrigate approximately 9.72 historic acres south of the side-roll sprinkler in the SENW and NESW Section 32. Pursuant to a memo dated December 2, 2015, changes to method of irrigation within the historic footprint of irrigated acres are not considered by the Department in the comparison of historic to proposed consumptive use. There are approximately 3.06 AC under the sprinkler systems that were not in the historic place of use. The Applicant will retire 4.73 AC of historic irrigation around the center pivot in NENE Section 31 and SWSW Section 29. The new acres are under the side-roll sprinkler and have the same IWR as flood irrigation (24.57 inches). The consumptive use of these acres varies from the historic consumption by the irrecoverable losses and county management factor. The consumptive use of 3.06 new acres is $3.06 \times 24.57 / 12 \times .727 = 4.55$ AF. Given that the sprinkler is 70% efficient, the applied volume on the 3.06 AC will be 6.5 AF ($4.55 \text{ AF} / .7 = 6.5 \text{ AF}$) and the irrecoverable losses are 0.65 AF. The total consumption on the 3.06 new acres is $4.55 \text{ AF} + 0.65 \text{ AF} = 5.2 \text{ AF}$. The average per acre historic consumptive use is $112.17 \text{ AF} / 103.36 \text{ AC} = 1.1 \text{ AF/AC}$. The Applicant will retire 4.73 AC ($5.2 \text{ AF} / 1.1 \text{ AF/AC}$) of historically irrigated land to account for the increased consumption on the added 3.06 AC. The new and historic consumptive uses are equal.

14. The longest cycle of irrigation that may be used in dry years is 133 days. Given the historic diverted volume (323.9 AF); the Applicant could divert 2.58 CFS for the 2 new pumps and original headgate for approximately 63.4 days. Using a 133 day cycle and 800 GPM for the new pumps (1.78 CFS), the diverted volume for the 2 new PODs would be $133 \text{ days} \times 1.98 \times 1.78 \text{ CFS} = 468.7 \text{ AF}$, in excess of the 323.9 AF historic diverted volume. The 3 PODs cannot exceed a combined flow rate of 2.58 CFS and volume of 323.9 AF. The Department will add the following conditions, agreed to by the Applicant as part of the application. The two pumps would be subject to the following measurement requirement.

WATER MEASUREMENT-INLINE FLOW METER REQUIRED

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN

PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30TH OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

The original headgate to the Brewster East Side Ditch would be subject to the following measurement requirement.

WATER MEASUREMENT – WATER USE MEASURING DEVICE

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED WATER USE MEASURING DEVICE AT A POINT APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

15. The timing and amount of return flows to the Tongue River will change as a result of the conversion from flood to sprinkler irrigation. According to Department policy, under the changed conditions return flows will only be reviewed under a limited adverse effect analysis absent a valid objection. For purposes of this Preliminary Determination, return flows will be analyzed to determine if they enter back into the source prior to or at the location of the next appropriator, or the historically-diverted water that will be left instream after the change is available during the period of diversion either below the point of diversion or where return flows accrued to the

source (Department Policy Memorandum on Return Flows, April 1, 2016). In this instance, the first criterion is met. Return flows under the proposed change will enter back into the Tongue River prior to the next appropriator, in generally the same location as historically. The policy directs no further detailed analysis to be undertaken by the Department prior to receiving a valid objection, provided there will be no enlargement of the amounts of water historically diverted or consumed. That has been determined to be the case here. If any other water right holder believes they will be adversely affected by a change in the timing and amount of return flows, they may file a valid objection to the proposed project and further analysis will occur.

16. There are no water rights with points of diversion between the Brewster East Side Ditch point of diversion and the proposed additional points of diversion. The Applicant would not be able to call water rights that could not be called previously.

BENEFICIAL USE

FINDINGS OF FACT

17. Applicant proposes to use water for irrigation. Irrigation is a recognized beneficial use under the Montana Water Use Act. § 85-2-102, MCA

18. Applicant proposes to use 2.58 CFS flow rate and 323.9 AF diverted volume. This amount is 11.7 GPM/AC and 3.28 AF/AC which is supported by the historic irrigation use and is within Department standards for a combination of sprinkler (2.30 to 2.69 AF/AC) and flood (3.58 to 4.19 AF/AC) irrigation in climate area II.

ADEQUATE DIVERSION

FINDINGS OF FACT

19. The Applicant intends to retain the Brewster East Side Ditch headgate. Water diverted into the ditch would be used to irrigate historically irrigated acres not covered by sprinkler systems. No change in the original diversion or conveyance is proposed.

20. The new point of diversion in NESWNW Section 32 T6S R42E (pump 19) is a Baldor 15 HP electric motor on a Berkeley 3" pump with a capacity of 300 GPM. It delivers water to a sideroll sprinkler system covering approximately 22.82 AC.

21. The new point of diversion in NESWNW Section 32 T6S R42E (pump 20) is a Baldor 30 HP electric motor on a Berkeley 3" pump with a capacity of 500 GPM. It delivers water to a part circle, 7 tower, center pivot sprinkler system covering approximately 69.15 AC.

22. The system including all pumps and sprinkler systems has been in place and operational for a number of years. No changes to existing facilities and no new facilities are proposed. This change would bring the new diversions into compliance with the Montana Water Use Act.

POSSESSORY INTEREST

FINDINGS OF FACT

23. Lonnie Wright, Manager of Diamond Cross Properties, LLC, signed the affidavit on the application form affirming the Applicant has possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

CONCLUSIONS OF LAW

HISTORIC USE AND ADVERSE EFFECT

24. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. McDonald v. State, 220 Mont. 519, 530, 722 P.2d 598, 605 (1986)(beneficial use constitutes the basis, measure, and limit of a water right); Featherman v. Hennessy, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911)(increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940)(appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924)(“quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does not own the water. He has a right of ownership in its use only”); Town of Manhattan, at ¶ 10 (an appropriator's right only attaches to the amount of water actually taken and beneficially applied); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pg. 9 (2011)(the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to

MWUA change provisions); In the Matter of Application to Change a Water Right No. 411 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004).¹

25. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 96 P. 727, 731 (1908); Quigley, 110 Mont. at 505-11, 103 P.2d at 1072-74; Matter of Royston, 249 Mont. at 429, 816 P.2d at 1057; Hohenlohe, at ¶¶43-45.²

26. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the “historic use” of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department’s obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or potential for adverse effect.³ A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. Quigley, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a

¹ DNRC decisions are available at:

http://www.dnrc.mt.gov/wrd/water_rts/hearing_info/hearing_orders/hearingorders.asp

² See also Holmstrom Land Co., Inc., v. Newlan Creek Water District, 185 Mont. 409, 605 P.2d 1060 (1979); Lokowich v. Helena, 46 Mont. 575, 129 P. 1063(1913); Thompson v. Harvey, 164 Mont. 133, 519 P.2d 963 (1974)(plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley, 159 Mont. 72, 495 P.2d 186 (1972)(appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909)(successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, Gassert v. Noyes, 18 Mont. 216, 44 P. 959(1896)(change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff’s subsequent right).

³ A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under §85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. §85-2-234, MCA

decree only provides a limited description of the right); Royston, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of Application For Beneficial Water Use Permit By City of Bozeman, *Memorandum*, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9, 1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).⁴

27. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. E.g., Hohenlohe, at ¶44; Rock Creek Ditch & Flume Co. v. Miller, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); Newton v. Weiler, 87 Mont. 164, 286 P. 133(1930); Popham v. Holloron, 84 Mont. 442, 275 P. 1099, 1102

⁴ Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District, 717 P.2d 955, 959 (Colo. 1986)("[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right."); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo., 1999); Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)("We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation"); Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557, 564 -566 (Wyo, 1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

(1929); Galiger v. McNulty, 80 Mont. 339, 260 P. 401 (1927); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909); Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731; Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; In the Matter of Application for Change Authorization No. G (W)028708-411 by Hedrich/Straugh/Ringer, DNRC Final Order (Dec. 13, 1991); In the Matter of Application for Change Authorization No. G(W)008323-G76l By Starkel/Koester, DNRC Final Order (Apr. 1, 1992); In the Matter of Application to Change a Water Right No. 41l 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004); Admin. R.M. 36.12.101(56)(Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).⁵

28. Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. Royston, 249 Mont. at 431, 816 P.2d at 1059-60; Hohenlohe, at ¶¶ 45-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731. Noted Montana Water Law scholar Al Stone explained that the water right holder who seeks to change a water right is unlikely to receive the full amount claimed or historically used at the original place of use due to reliance upon return flows by other water users. Montana Water Law, Albert W. Stone, Pgs. 112-17 (State Bar of Montana 1994).

29. In Royston, the Montana Supreme Court confirmed that an applicant is required to prove lack of adverse effect through comparison of the proposed change to the historic use, historic consumption, and historic return flows of the original right. 249 Mont. at 431, 816 P.2d at 1059-60. More recently, the Montana Supreme Court explained the relationship between the fundamental principles of historic beneficial use, return flow, and the rights of subsequent appropriators as they relate to the adverse effect analysis in a change proceeding in the following manner:

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between

⁵ The Montana Supreme Court recently recognized the fundamental nature of return flows to Montana's water sources in addressing whether the Mitchell Slough was a perennial flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell's flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass'n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31, 43, 198 P.3d 219, ¶¶ 22, 31, 43(citing Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

the “amount historically consumed” and the water that re-enters the stream as return flow. . . .

An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law—that an appropriator has a right only to that amount of water historically put to beneficial use—developed in concert with the rationale that each subsequent appropriator “is entitled to have the water flow in the same manner as when he located,” and the appropriator may insist that prior appropriators do not affect adversely his rights.

This fundamental rule of Montana water law has dictated the Department’s determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe, at ¶¶ 42-45 (internal citations omitted).

30. The Department’s rules reflect the above fundamental principles of Montana water law and are designed to itemize the type evidence and analysis required for an applicant to meet its burden of proof. Admin.R.M. 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. Admin.R.M. 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic diversions and return flows. Admin.R.M. 36.12.1901 and 1903.

31. Applicant seeks to change existing water rights represented by its Water Right Claims. The “existing water rights” in this case are those as they existed prior to July 1, 1973, because with limited exception, no changes could have been made to those rights after that date without the Department’s approval. Analysis of adverse effect in a change to an “existing water right” requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973. In McDonald v. State, the Montana Supreme Court explained:

32. The foregoing cases and many others serve to illustrate that what is preserved to owners of appropriated or decreed water rights by the provision of the 1972 Constitution is what the law has always contemplated in this state as the extent of a water right: such amount of water as, by pattern of use and means of use, the owners or their predecessors put to beneficial use. . . . the Water Use Act contemplates that all water

rights, regardless of prior statements or claims as to amount, must nevertheless, to be recognized, pass the test of historical, unabandoned beneficial use. . . . To that extent only the 1972 constitutional recognition of water rights is effective and will be sustained. 220 Mont. at 529, 722 P.2d at 604; see also Matter of Clark Fork River Drainage Area, 254 Mont. 11, 17, 833 P.2d 1120 (1992).

33. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in Ravalli and Missoula Counties, 295 Mont. 447, 453, 984 P.2d 151, 155 (1999)(Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust, 280 Mont. 196, 213, 930 P.2d 37, 47 (1996)(Water Resources Survey used as evidence in a prescriptive ditch easement case); Olsen v. McQueary, 212 Mont. 173, 180, 687 P.2d 712, 716 (1984) (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).

34. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. See MacDonald, 220 Mont. at 529, 722 P.2d at 604; Featherman, 43 Mont. at 316-17, 115 P. at 986; Trail's End Ranch, L.L.C. v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004).

35. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. Admin. R. M. 36.12.1902 (16). In the alternative an applicant may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under Admin. R.M. 36.12.1902. (FOF 8).

36. If an applicant seeks more than the historic consumptive use as calculated by Admin.R.M .36.12.1902 (16), the applicant bears the burden of proof to demonstrate the amount of historic consumptive use by a preponderance of the evidence. The actual historic use of

water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., supra; Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization “duty of water”).

37. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Statement of Claim No. 42B 183628-00 of 2,58 CFS flow rate and 323.9 AF diverted volume with a consumptive use of 112.2 AF. (FOF 6 - 10)

38. Based upon the Applicant's comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA. (FOF 11 - 16)

BENEFICIAL USE

39. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: “[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . .” McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. Admin.R.M. 36.12.1801. The amount of water that may be authorized for change is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court (2003) (*affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); Worden v. Alexander, 108 Mont. 208, 90 P.2d 160 (1939); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924); Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, *Order Affirming DNRC Decision*, Pg. 3 (2011)(citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet

when a typical year would require 200-300 acre-feet); Toohey v. Campbell, 24 Mont. 13, 60 P. 396 (1900)(“The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes.”); §85-2-312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

40. Applicant proposes to use water for irrigation which is a recognized beneficial use. §85-2-102(4), MCA. Applicant has proven by a preponderance of the evidence irrigation is a beneficial use and that 2.58 CFS flow rate and 323.9 AF of diverted volume of water requested is the amount needed to sustain the beneficial use. §85-2-402(2)(c), MCA (FOF 17, 18)

ADEQUATE MEANS OF DIVERSION

41. Pursuant to §85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. Crowley v. 6th Judicial District Court, 108 Mont. 89, 88 P.2d 23 (1939); In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).

42. Pursuant to §85-2-402 (2)(b), MCA, applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. (FOF 19 - 22)

POSSESSORY INTEREST

43. Pursuant to §85-2-402(2)(d), MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. See also Admin.R.M. 36.12.1802

44. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (FOF 23)

PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 42B 30107350 should be granted subject to the following. The Applicant may add two points of diversion in NESWNE Section 32, T6S, R42E, Rosebud County. The Applicant may change the place of use to:

1.20 AC	S2S2NWSW Section 29, T6S, R42E, Rosebud County
21.57 AC	SWSW Section 29, T6S, R42E, Rosebud County
14.00 AC	E2SESE Section 30, T6S, R42E, Rosebud County
11.70 AC	E2NENE Section 31, T6S, R42E, Rosebud County
3.60 AC	SENENW Section 32, T6S, R42E, Rosebud County
23.70 AC	NWNW Section 32, T6S, R42E, Rosebud County
22.66 AC	SENEW Section 32, T6S, R42E, Rosebud County
3.26 AC	N2NESW Section 32, T6S, R42E, Rosebud County

The application will be subject to the following conditions, limitations or restrictions. The additional PODs (POD ID# 2 and 3) would be subject to the following condition.

WATER MEASUREMENT-INLINE FLOW METER REQUIRED

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30TH OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

The Brewster East Side Ditch Headgate (POD ID #1) would be subject to the following condition.

WATER MEASUREMENT – WATER USE MEASURING DEVICE

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED WATER USE MEASURING DEVICE AT A POINT APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§85-2-307, and -308, MCA. If this Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and §85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§85-2-310, -312, MCA.

DATED this 30th day of December 2016.

/Original signed by Kimberly Overcast/
Kimberly Overcast, Manager
Billings Regional Office
Department of Natural Resources
and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this ____ day of _____ 20____, by first class United States mail.

LONABAUGH AND RIGGS, LLP
ATTN: ROBERT BERGER
SUITE 110 50 EAST LOUCKS STREET
DRAWER 5059
SHERIDAN, WY 82801

MARK ELISON

Date